



PATIENT

Rico Doris

SPECIES

Canine

BREED

Havanese

SEX

Neutered Male

AGE

11 Years

WEIGHT

13 Pounds

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

**IMAGING
PERFORMED BY**

Dr. Desen Ertunc

HOSPITAL NAME

Healing Spirit

REFERRING VET

Dr. Desen Ertunc

INVOICE

26613

DATE

10/24/21

PRESENTING CLINICAL SIGNS

Progressive liver enzyme elevation with normal BAs on last check Sept 2021. 0.5 Lb weight loss from 7/29/21 to 9/1/21, no other clinical signs.

Abnormal PE/Chem/CBC/UA Results: 7/29/21= ALT= 472, pre-prandial BA = 5.5, post-prandial BA= 24.2, CBC: WBC= 4570, PMN= 2500, all other values WNL. 9/1/21= ALT= 845

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The ureters were not visible which is normal. No uroliths or sediment were visualized and anechoic urine was present. No evidence of inflammatory or neoplastic changes were noted. Ureteral papillae were normal.

The **kidneys** revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some age-related loss of curvilinear patterns regarding the capsule and C/M junction. The cortices presented largely uniform texture with some increased echogenicity expected for his age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present.

Adrenal Glands

Both **adrenal glands** were visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The right adrenal gland measured 1.6 cm x 0.58 cm at the caudal pole and 0.49 cm at the cranial pole. The left adrenal gland measured 0.5 cm in width.

Spleen

The **spleen** presented a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma. The capsule was smooth without noticeable expansion or deviation from within the spleen or adjacent pathology. The splenic vasculature demonstrated normal volume without signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarctual changes were noted.

Liver

The **liver** presented coarse architecture and hyperechoic nodules, non-disruptive. The largest nodule measured 2.0 cm x 1.0 cm. The gallbladder and common bile duct were unremarkable. Mild increased portal markings noted. Largely expected changes for this age patient.

Gastrointestinal

Examination of the **gastrointestinal tract** revealed a stomach and intestine free of stasis, of normal wall thickness, acceptable curvilinear mural detail, and peristaltic activity. Small and large intestine demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted.

Pancreas

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Some parenchymal remodeling, however, with mild deviation from curvilinear normalcy was observed. Pancreatic duct and capsular irregularities were present consistent with age related changes. If pain



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upon imaging (+ Murphy sign) was present or if the patient is focally painful in subxyphoid palpation then low-grade smoldering chronic pancreatitis should be suspected.

ULTRASONOGRAPHIC FINDINGS

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- Essentially geriatric abdomen with non-specific inflammatory hepatopathy

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

BREED

Havanese

Ultrasound guided FNA and liver support protocol recommended. No evidence of intrahepatic or extrahepatic shunts. The nodular changes are most consistent with hyperplasia, mild potential for emerging carcinoma, yet architecture was not deviated with any of the nodular changes. Recheck sonogram of the liver in one month.

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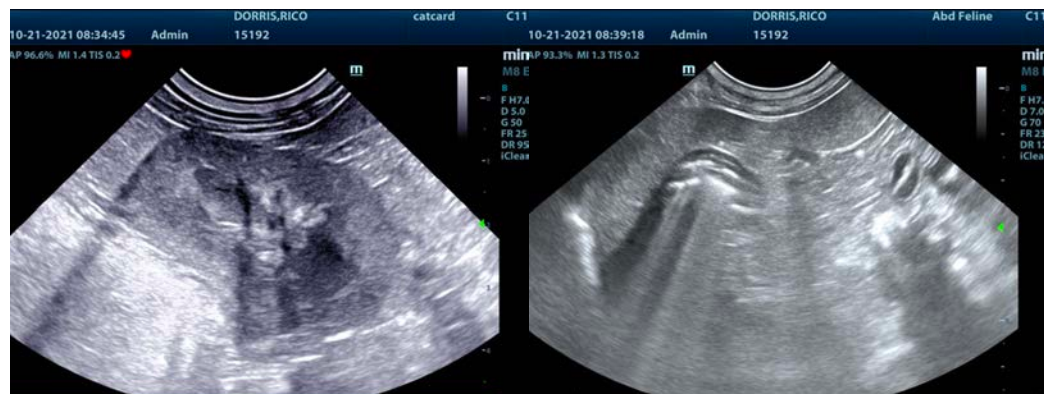
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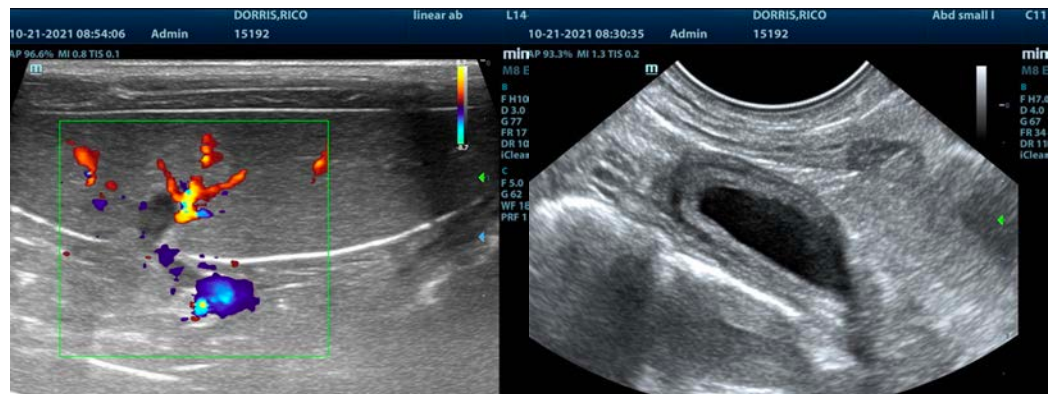
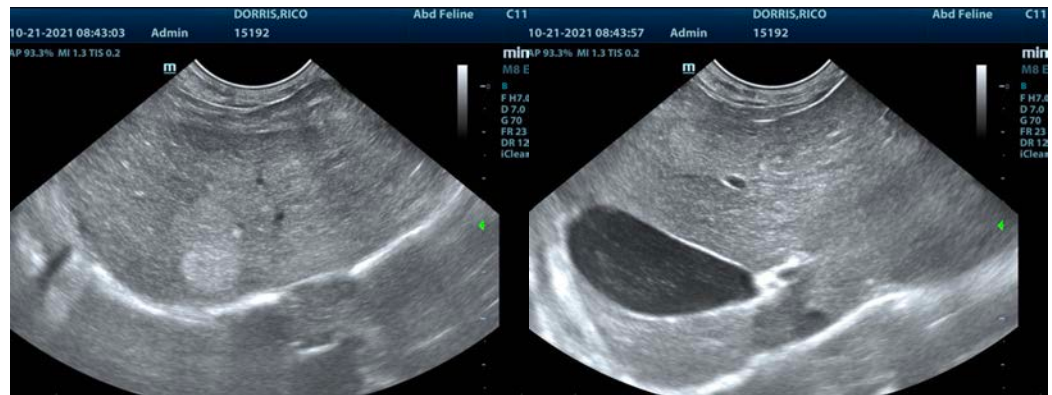
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance please contact me.

Eric Lindquist, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com
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